

STANDARDS, 2014 NATIONAL ELECTRICAL CODES®

Applications: Steel Boxes

RACO® high-quality steel boxes:

- Are used in branch circuit wiring
- Accommodate wiring devices, such as switches and receptacles
- Most may also serve as fixture supports
- Provide excellent protection for wiring system or devices
- Must be closed with a cover, light fixture canopy or wallplate
- Permit access to conductors for maintenance
- Allow for branch circuit runs
- Provide two-hour fire rating for 4x4 or smaller wall opening

Product Features: Outlet Boxes for Fixture or Fan Support

These high-quality boxes:

- Are listed to support lighting fixture canopies or fans
- Feature oversized #10 screws to provide strength and rigidity

Product Features: TKO® Knockouts

- TKO® knockouts offer greater flexibility with RACO® combination 1/2" and 3/4" knockout
- Stock just one product instead of two or three
- One product for the installer to carry

TKO® Provides Reliable Grounding Path

- Independent tests conducted by UL prove that the TKO passes the same high-current fault test used to test grounding bushings and ground lugs
- RACO® TKO knockout is UL Listed, providing bonding without the use of bonding jumpers
- Suitable for bonding without any additional bonding means around concentric (or eccentric, TKO) knockouts where used in circuits above or below 250V
- This knockout does not impair the electrical connection to ground

Most RACO® Boxes Have At Least One Tapped #10-32 Grounding Hole

- The products that do not have a grounding screw hole are: plenum boxes catalog numbers 226 and 239

Product Features: Combination Screw Heads

- Cover and clamp screws have combination slotted/Phillips heads
- Self-tapping screws provide for 100% thread engagement

Metallic Boxes: Fire Resistance Rating Wall Penetrations*

Listed single- and double-gang metallic outlet and switch boxes with metallic or nonmetallic cover plates, also 4x4 and octagon boxes may be used in bearing and non-bearing wood stud and steel stud walls with ratings not exceeding two hours.

The surface area of individual metallic outlet or switch boxes shall not exceed 16 square inches through a fire rated wall. The aggregate surface area of the boxes shall not exceed 100 square inches per 100 square feet. Boxes located on opposite sides of walls or partitions shall be separated by a horizontal distance of 24 inches.

The metallic outlet or switch boxes shall be securely fastened to the studs, and the opening in the wallboard facing shall be cut so that the clearance between the box and the wallboard does not exceed 1/8 inch.

* Reference: UL Fire Resistance Directory (Orange Book)

Standard Material: Steel Covers, Outlet And Switch Boxes

- Steel boxes and covers are made of .0625 inch thick pre-galvanized sheet steel
- Handy Box covers are made of .030 inch thick galvanized sheet steel

Compliances

RACO® steel boxes and covers generally carry the following compliance ratings. Check specific catalog pages for individual compliances.

- UL Listed – Standard 514-A, file E195978 (“QCIT” Category)
- Boxes and covers are listed for their Electrical Applications (electrical codes), UL Electrical Construction Equipment Online Directory (electrical codes).
- Boxes are listed for Fire Resistance Directory, including the Two-Hour Fire Rating, (building codes) UL Orange Book
- UL Classified Standard – UL263 file R16536, CEYY, QBWY
- CSA Certified – C22.2 #18, CSA File LR-1082
- ANSI/NEMA OS1
- Federal Manufacturer’s number 28488



For installation guidelines and to learn more about RACO® products, visit the NEMA website at <http://www.nema.org>.

The National Electrical Manufacturers Association (NEMA) website is a valuable electrical resource providing the information you need - quickly.

RACO® UL Guide Cards

You can download and print out any or all UL Guide Cards issued to RACO®. Just go to the RACO website at www.hubbell-raco.com and click on the UL symbol. Every RACO UL guide card is listed by product category. Click on the live link (right hand column in blue type) and the UL Guide Card will appear. Save to your computer or print it out.

UL Guide Information Pages

UL publishes the most frequently asked questions concerning product ratings, configurations, installations, uses allowed or not allowed, grounding and bonding, and much more. Each UL category has a unique Guide Information Page. Live links to each UL Guide Information Page appears just below the RACO UL guide card for each product category.

MASONRY BOXES



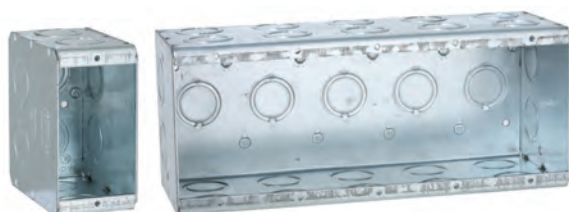
MASONRY BOXES AND PARTITIONS



690 through 694



960



695 through 699



965



971

APPLICATIONS

- RACO® Masonry boxes are designed to accommodate the mounting of switches or other devices in masonry walls
- Gangable masonry boxes offer the option of constructing a box to hold two or more devices
- 2-1/2" deep boxes are used in 4" block walls, 3-1/2" deep boxes are used in 6" or 8" block walls

NONGANGABLE PRODUCT FEATURES

- Rugged welded design does not fall apart during construction
- Available from one to six gang configurations in both 2-1/2" and 3-1/2" depths
- Rectangular shape fits square cuts in block
- Large volume design allows for additional work room inside the box
- Standard 1/2" and 3/4" concentric Knockouts
- Device ears inside the box prevent mortar from getting in the device holes
- Steel low voltage partition #971 fits all 2-1/2" or 3-1/2" depths
- Standard wall plates can be used

COMPLIANCE

- File E195978 (Cat. #971 not UL Listed)

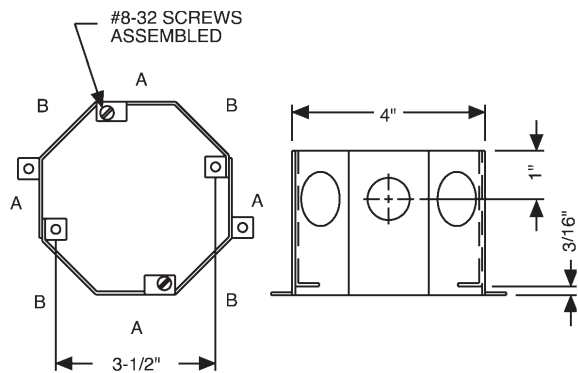
CAT. #	DESCRIPTION	CUBIC INCHES (CM ³)	KNOCKOUTS			STD. PKG.	BAR CODE
			SIDES CONDUIT	ENDS CONDUIT	BOTTOM CONDUIT		
Masonry Boxes, 2-1/2" Deep – Nongangable with Conduit KO's							
690	1 Gang, 1-31/32" Wide	16.0 (262.1)	4 Conc.	2 Conc.	2 Conc.	25	—
691	2 Gang, 3-25/32" Wide	31.8 (521.1)	4 Conc.	4 Conc.	4 Conc.	25	—
692	3 Gang, 5-19/32" Wide	47.8 (783.3)	4 Conc.	6 Conc.	3 Conc.	10	—
693	4 Gang, 7-13/32" Wide	63.5 (1040.5)	4 Conc.	8 Conc.	4 Conc.	10	—
694	5 Gang, 9-7/32" Wide	79.5 (1302.7)	4 Conc.	10 Conc.	5 Conc.	10	—
960	6 Gang, 11-1/32" Wide	95.3 (1561.6)	4 Conc.	12 Conc.	6 Conc.	1	—
Masonry Boxes, 3-1/2" Deep – Nongangable with Conduit KO's							
695	1 Gang, 1-31/32" Wide	22.5 (368.7)	4 Conc.	4 Conc.	2 Conc.	25	—
8695	1 Gang, 1-31/32" Wide	22.5 (368.7)	4 Conc.	4 Conc.	2 Conc.	25	
696	2 Gang, 3-25/32" Wide	45.0 (737.4)	4 Conc.	8 Conc.	4 Conc.	25	
697	3 Gang, 5-19/32" Wide	67.3 (1102.8)	4 Conc.	12 Conc.	3 Conc.	10	
698	4 Gang, 7-13/32" Wide	89.8 (1471.5)	4 Conc.	16 Conc.	4 Conc.	10	—
699	5 Gang, 9-7/32" Wide	112.3 (1840.2)	4 Conc.	20 Conc.	5 Conc.	10	—
965	6 Gang, 11-1/32" Wide	134.8 (2208.9)	4 Conc.	24 Conc.	6 Conc.	1	—
CATALOG #	DESCRIPTION					STD. PKG.	BARCODE
Low Voltage Partitions for Masonry Boxes							
971	For Nongangable, 2-1/2" or 3-1/2" Deep Boxes					25	—

SEE END OF SECTION (PG A72) FOR DETAILED DRAWINGS >>



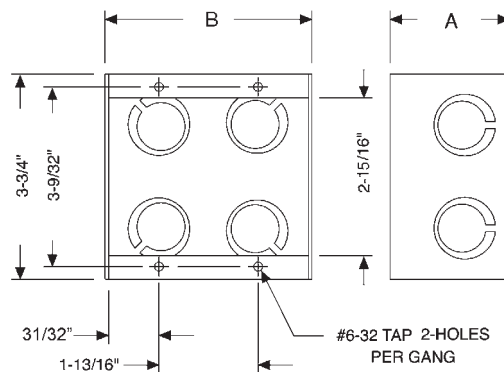
CONCRETE RINGS AND MASONRY BOXES

STEEL CONCRETE RINGS



KNOCKOUT SIZE	DIMENSIONS	
	A	B
1/2" & 3/4"	1/2"	3/4"
3/4" & 1"	3/4"	1"

STEEL MASONRY BOXES



CAT. #	DIMENSIONS	
	A (INSIDE)	B
688	2-1/2"	1-15/16"
690	2-1/2"	1-31/32"
691	2-1/2"	3-25/32"
692	2-1/2"	5-19/32"
693	2-1/2"	7-13/32"
694	2-1/2"	9-7/32"
960	2-1/2"	11-1/32"
689	3-1/2"	5-19/32"
695	3-1/2"	1-31/32"
8695	3-1/2"	1-31/32"
696	3-1/2"	3-25/32"
697	3-1/2"	5-19/32"
698	3-1/2"	7-13/32"
699	3-1/2"	9-7/32"
965	3-1/2"	11-1/32"